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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/082,581	05/21/1998	KENJI NAGASE	980673	2888

23850 7590 01/30/2002

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WASHINGTON, DC 20006

EXAMINER

WHIPKEY, JASON T

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 01/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/082,581

Applicant(s)

NAGASE, KENJI

Examiner

Jason T. Whipkey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6 is/are rejected.
- 7) ☒ Claim(s) 4 and 7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

- ✓1. Claim 7 is objected to because of the following informalities: the phrase "in a forward direction of from said first terminal." Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 through 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Iwamoto.

Regarding claim 1, Iwamoto discloses a power supply circuit with a circuit generating a positive polarity voltage (3 and the node connecting to terminal V_{DD} ; see column 2, lines 58-64), a terminal for outputting the positive voltage (V_{DD}), a circuit generating a negative polarity voltage (3, the node connecting to terminal V_{SS1} ; see column 2, lines 58-64), a terminal for outputting the negative voltage (V_{SS2} , when SW3 and SW4 are closed), and a short circuit for short circuiting the first and second terminals (SW5).

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Regarding claim 2, Iwamoto discloses that the switch may be a MOS transistor (column 9, lines 3-5). It is inherent that using its gate, a MOS transistor limits the current flowing through it.

Regarding claim 3, Iwamoto discloses that the switch may be a MOS transistor (column 9, lines 3-5). A transistor is a switching element.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamoto in view of Sawanobori.

Iwamoto discloses a power supply circuit with a circuit generating a positive polarity voltage (3 and the node connecting to terminal V_{DD} ; see column 2, lines 58-64), a terminal for outputting the positive voltage (V_{DD}), a circuit generating a negative polarity voltage (3, the node connecting to terminal V_{SS1} ; see column 2, lines 58-64), a terminal for outputting the negative voltage (V_{SS2} , when SW3 and SW4 are closed), and a short circuit for short circuiting the first and second terminals (SW5).

Iwamoto is silent with regard to using the power supply circuit with a CCD imager.

Sawanobori discloses a CCD (17) connected to a power supply (14) that produces a negative and positive voltage and discharges the CCD upon power off (lines 17-19 of the "constitution" section). As stated on line 19, this serves the purpose of preventing the destruction of the CCD. For this reason, it would be obvious to have the discharging power supply of Iwamoto connected to a CCD.

Allowable Subject Matter

6. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

No prior art could be located that teaches or fairly suggests a power supply that includes a chopper circuit producing a low positive voltage feeding into a fly-back circuit producing a high positive voltage with a diode connected between the terminals.

7. Claims 5 and 7 are allowed.

Regarding claim 5, no prior art could be located that teaches or fairly suggests a power supply that includes a chopper circuit producing a low positive voltage feeding into a fly-back circuit producing a high positive voltage with a diode connected between the terminals.

Regarding claim 7, no prior art could be located that teaches or fairly suggests a power supply as described above that is also connected to a CCD.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason T. Whipkey, whose telephone number is (703) 305-1819. The examiner can normally be reached Monday through Friday from 8 A.M. to 5:30 P.M., alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy R. Garber, can be reached on (703) 305-4929. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for both regular communication and After Final communication.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, whose telephone number is (703) 306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to (703) 872-9314 for either formal or informal communications intended for entry. (For informal or draft communications, please label "**PROPOSED**" or "**DRAFT**".)

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Hand-delivered responses should be brought to the sixth floor receptionist of
Crystal Park II, 2121 Crystal Drive in Arlington, Virginia.

JTW

JTW

January 25, 2002



WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600